

Start-up/Service Instructions

for use by heating contractor

VIESSMANN®

Vitocell 100-V

CVA Series

Enameled indirect-fired domestic hot water storage tank

42 USG to 120 USG (160 L to 450 L) capacity

Vitocell 100-B

CVB Series

Enameled, dual-coil, indirect-fired domestic hot water storage tank

79 USG and 120 USG (300 L and 450 L) capacity

VITOCELL® 100-V

VITOCELL® 100-B



Vitocell 100-B
CVB Series



Vitocell 100-V
CVA Series



Product may not be exactly as shown

IMPORTANT

**Read and save these instructions
for future reference.**

Safety, Installation and Warranty Requirements

Please ensure that these instructions are read and understood before commencing installation. Failure to comply with the instructions listed below and details printed in this manual can cause product/property damage, severe personal injury, and/or loss of life. Ensure all requirements below are understood and fulfilled (including detailed information found in manual subsections).

■ Licensed professional heating contractor

The installation, adjustment, service and maintenance of this equipment must be performed by a licensed professional heating contractor.

► *Please see section entitled "Important Regulatory and Installation Requirements".*



■ Advice to owner

Once the installation work is complete, the heating contractor must familiarize the system operator/ultimate owner with all equipment, as well as safety precautions/requirements, shutdown procedure, and the need for professional service annually before the heating season begins.

■ Product documentation

Read all applicable documentation before commencing installation. Store documentation near product in a readily accessible location for reference in the future by service personnel.

► *For a listing of applicable literature, please see section entitled "Important Regulatory and Installation Requirements".*



■ Warranty

Information contained in this and related product documentation must be read and followed. Failure to do so renders the warranty null and void.



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Important Regulatory and Installation Requirements

Instructing the system user

The installer of the system is responsible to ensure the system operator/ultimate owner is made familiar with the system functioning, its activation, and its shut-down. The operator/ultimate owner should also be instructed to complete and mail the warranty registration form in order to be eligible for limited warranty.

Initial start-up

Initial start-up must be performed by a qualified heating contractor. Completion of the Maintenance Record by the heating contractor is also required.

Working on the equipment

The installation, adjustment, service, and maintenance of this equipment must be done by a licensed professional heating contractor who is qualified and experienced in the installation, service, and maintenance of hot water heating systems. There are no user serviceable parts on this equipment.

Ensure main power supply to equipment, the heating system, and all external controls has been deactivated. Close main oil or gas supply valve. Take precautions in both instances to avoid accidental activation of power during service work.

Technical literature

Literature applicable to all aspects of the Vitocell:

- Technical Data Manual
- Installation Instructions
- Start-up/Service Instructions
- Operating Instructions and User's Information Manual

► *The following topics must be covered:*

Proper system operation sequence.
Explain the equipment as well as the need for combustion air. Demonstrate an emergency shut-down, what to do and what not.
Explain that there is no substitute for proper maintenance to help ensure safe operation.

► The Maintenance Record is located on page 15 of this manual.

► Please carefully read this manual prior to attempting installation. Any warranty is null and void if these instructions are not followed.

This product must be installed observing not only the information and instructions provided in the pertinent product literature (see list below), but also all local, provincial/state plumbing and building codes as they apply to this product and all periphery equipment

For information regarding other Viessmann System Technology componentry, please reference documentation of the respective product.

We offer frequent installation and service seminars to familiarize our partners with our products. Please inquire.

► The completeness and functionality of field supplied electrical controls and components must be verified by the heating contractor. These include low-water cut-offs, flow switches (if used), staging controls, pumps, motorized valves, air vents, thermostats, temperature controls, etc.

► Leave all literature at the installation site and advise the system operator/ultimate owner where the literature can be found. Contact Viessmann for additional copies.

About These Instructions



Take note of all symbols and notations intended to draw attention to potential hazards or important product information. These include "WARNING", "CAUTION", and "IMPORTANT". See below.



WARNING

Indicates an imminently hazardous situation which, if not avoided, could result in substantial product/property damage, serious injury or loss of life.

► Warnings draw your attention to the presence of potential hazards or important product information.



CAUTION

Indicates an imminently hazardous situation which, if not avoided, may result in minor injury or product/property damage.

► Cautions draw your attention to the presence of potential hazards or important product information.

IMPORTANT

► Helpful hints for installation, operation or maintenance which pertain to the product.



► This symbol indicates that additional, pertinent information is to be found.



► This symbol indicates that other instructions must be referenced.

Necessary Tools

Special Items

- Torque wrench

Cleaning supplies

- High pressure washer
- Chemical cleaning liquid
- Cleaning cloth

Parts

- Gasket for inspection opening



CAUTION

Never use a metal brush to clean tank interior or heat exchanger - only plastic material may be used.

Initial Start-up



For initial start-up of the tank, reference the Installation Instructions as well as Operating Instructions and User's Information Manual of tank.

1. Fill tank with domestic drinking water.
2. Check heating side and domestic water side adaptors for leaks. Tighten if necessary.
3. Ensure that DHW tank temperature sensor is properly inserted into sensor well.
4. Verify proper operation of temperature and pressure relief valve (T&P valve).
5. Activate power supply.

IMPORTANT

Tightening the inspection and clean-out opening is not necessary.

IMPORTANT

Use Loctite 55 pipe sealing compound on all threaded steel nipples on tank.



See Installation Instruction Supplement for fittings supplied with tank.

Service Procedures

Inspection and (if necessary) cleaning of tank must take place within 2 years of initial start-up and as required thereafter.

In the event that the building is unoccupied and not heated and the danger of frost within the structure exists, the tank as well as the heat exchanger coil must be drained.

In case the heating system is filled with an antifreeze (which must be of non-toxic composition), only the tank must be drained of domestic water and all valves in the domestic hot water and domestic cold water piping except for the main fill valve must remain open.

Ensure the DHW recirculation pump is deactivated (if applicable).

Service

1. Shut down heating system

Ensure main power supply to equipment, the heating system and all external controls has been shut down. Take precautions in all instances to avoid accidental activation.

Service

2. Check all connections

1. Check heating side and domestic water side adaptors for leaks. Tighten if necessary.
2. Check sensor well for leaks. Tighten if necessary.

Service

3. Ensure proper operation of all safety devices

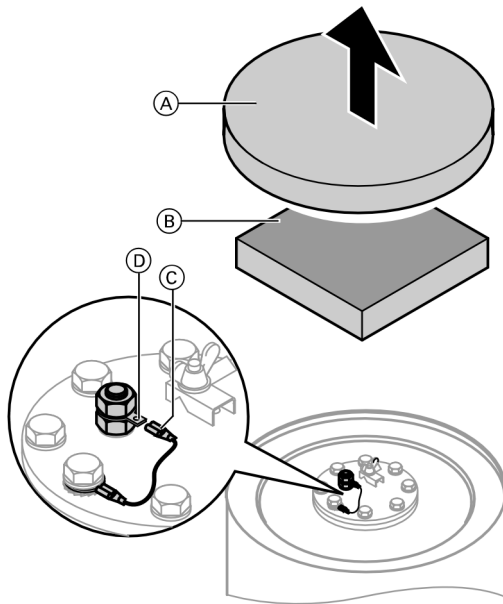
Verify proper operation of temperature and pressure relief valve (T&P valve).

Service

4. Check anode protective current with testing device

IMPORTANT

Viessmann recommends annual inspection of the magnesium anode. The inspection takes place with an anode testing device, measuring the protective current and does therefore not require shut-down of the heating system.

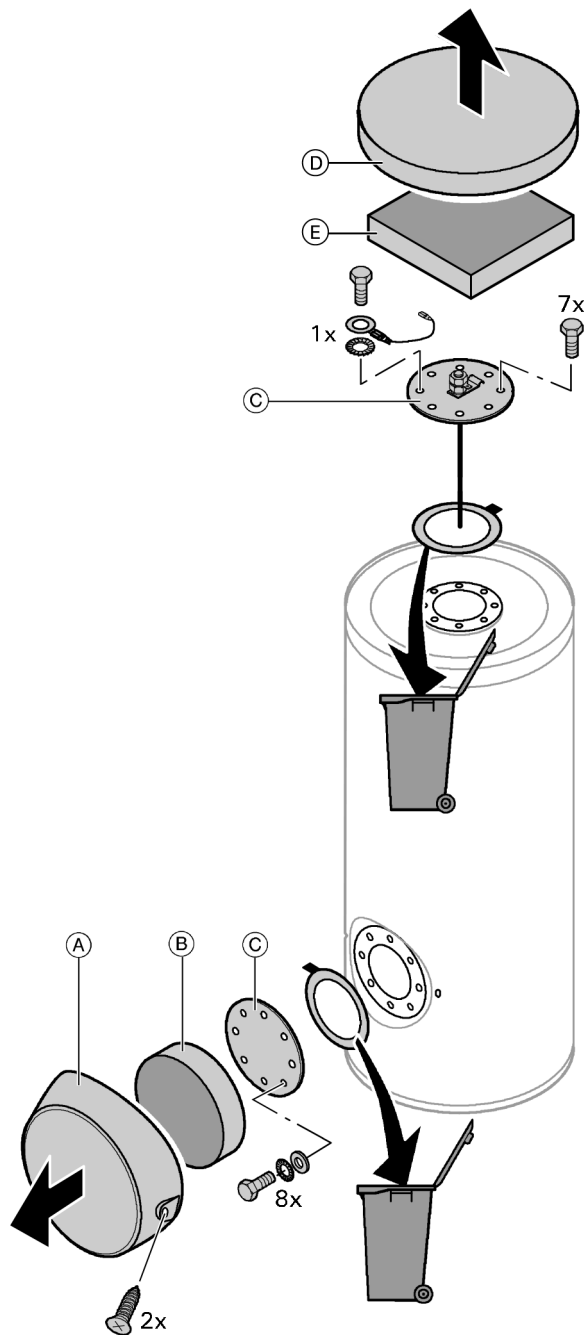


1. Remove top panel (A), fiberglass / foam insulation blanket (B) and the thermometer sensor.
2. Pull grounding cable (C) off insertion tap (D).
3. Connect anode testing device (testing range of up to 5 mA) between insertion tap (D) and grounding cable (C) in series.
 - If a current > 0.3 mA is measured, the anode is functional.
 - If a current < 0.3 mA or no current is measured, the anode must undergo a visual inspection (see subsection 5).

Service

5. Clean outside of tank

Clean tank enclosure panel with a commercially available alcohol-based glass cleaning agent and a soft clean cloth.

Service Procedures *(continued)***Service****6. Clean inside of tank**

1. Drain domestic water from DHW tank.
2. Remove front cover (A) and fiberglass / foam insulation blanket (B).
3. Remove top and side flanged covers (C).
4. To prevent chemicals from entering piping, disconnect tank from domestic cold water piping system via adaptor.
5. Remove loose build-ups with a pressure washer.
6. Remove stubborn build-ups which are resistant to the pressure washer with a chemical cleaner (use any non-toxic delimer).
7. Rinse interior of tank thoroughly after use of chemical cleaners.

! WARNING

Water being drained may be hot!

IMPORTANT

Cleaning of the Vitocell 100 can be done from either the top (if necessary), or the front inspection port / clean-out opening.

CAUTION

Never use a metal brush to clean tank interior or heat exchanger - only plastic material may be used.

! WARNING

Never use any cleaners containing muriatic acid. Follow the manufacturer's instructions and warnings when utilizing chemical cleaners for deliming and cleaning devices.

Note: The side cleanout / inspection port applies only to the 79 USG (300 L) and the 120 USG (450 L) tanks.

Service**7. Check and replace magnesium anode (if required)**

1. Check magnesium anode.
2. Replace magnesium anode if required.

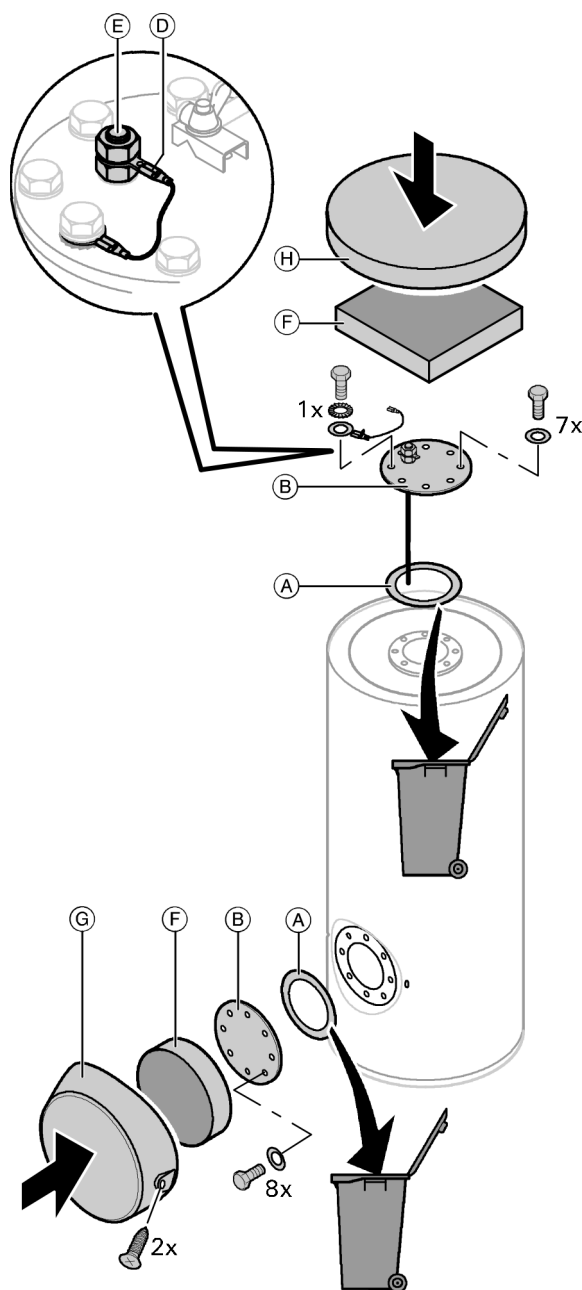
IMPORTANT

Should you notice an anode diameter reduction to 0.4 - 0.6 in. (10 - 15 mm), we recommend that you replace the anode.

Service Procedures *(continued)*

Service

8. Place DHW tank in operation again



1. Reconnect DHW tank to piping system.
2. After every opening insert new gaskets (A) into flanged openings.
3. Mount flange (B) and pull tight with max. torque of 25 Nm (18.5 lbf/ft).
4. Fill DHW tank on DHW side.
5. Slide grounding cable (D) onto insertion tap (E).
6. Reinstall insulation blankets (F), cover of inspection opening (G) and top panel (H).
7. Record performed service in Maintenance Record.
8. Check all connections for leaks. Tighten if necessary.

Note: Temperature and pressure relief valve connection on top flanged cover (C) is not illustrated.

IMPORTANT

The Maintenance Record is found on page 15 of this manual.

Note: The side cleanout / inspection port applies only to the 79 USG (300 L) and the 120 USG (450 L) tanks.

Service

9. Place system in operation again

Ensure main power supply to equipment, the heating system and all external controls are reactivated.

Vitocell 100-V, CVA Series 42 to 79 USG (160 to 300 Liter)

Model No.	Serial No.
42 USG (160 L)	7134160□□□□□□□□
53 USG (200 L)	7134161□□□□□□□□
79 USG (300 L)	7134162□□□□□□□□

Ordering Replacement Parts

Please provide tank Model and Serial Number from rating plate when ordering replacement parts. Order replacement components from your Viessmann distributor.

Parts

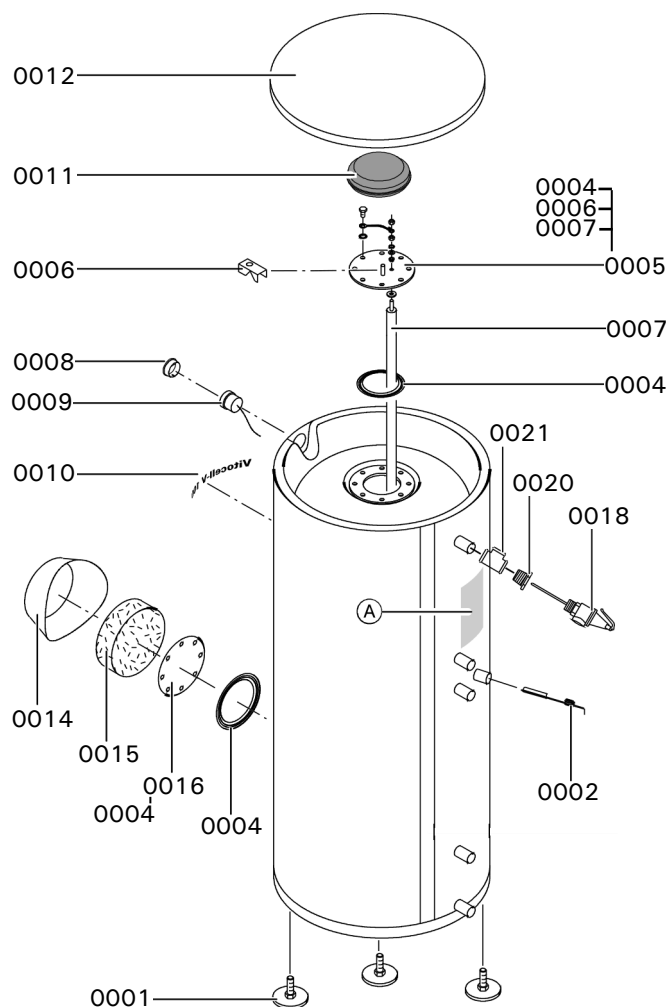
0001	Leveling foot
0002	Sensor mounting hardware
0004	Gasket
0005	Flange, top
0006	Clamping bracket
0007	Consumable anode
0008	Thermometer blank cover
0009	Thermometer
0010	Vitocell 100 nameplate
0011	Flange insulation
0012	Top panel
0014	Front cover [applies only to the 79 USG (300 L) tank]
0015	Insulation for cover [applies only to the 79 USG (300 L) tank]
0016	Flange, front [applies only to the 79 USG (300 L) tank]
0018	Temperature and pressure relief valve
0020	Reducer bushing, 1 in. x ¾ in. (only applicable to models CVA-300 and -450)
0021	Brass tee, 1 in.

Parts (not illustrated)

050	Installation Instructions
051	Start-up/Service Instructions
052	Operating Instructions and User's Information Manual
053	Touch-up spray paint, vitosilver
054	Touch-up paint stick, vitosilver

(A) Rating plates

Note: The side cleanout / inspection port position 0014, 0015, 0016 and 0004 applies only to the 79 USG (300 L) and the 120 USG (450 L) tanks.



Vitocell 100-V, CVA Series 120 USG (450 Liter)

Model No. 120 USG (450 L) **Serial No.** 7510399□□□□□□□□

Ordering Replacement Parts:

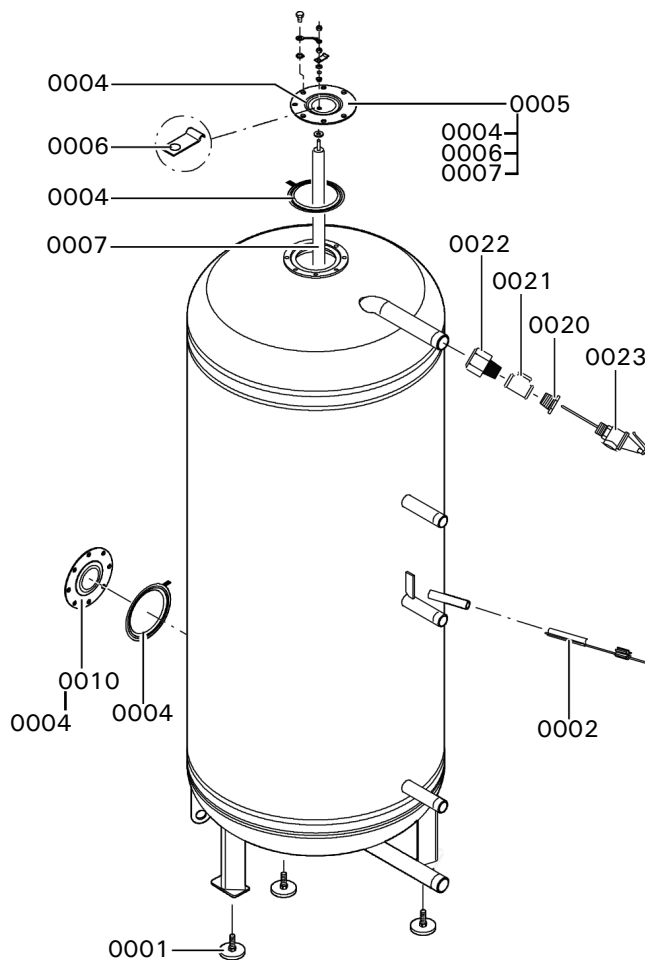
Please provide tank Model and Serial Number from rating plate when ordering replacement parts. Order replacement components from your Viessmann distributor.

Parts

0001	Leveling foot
0002	Sensor mounting hardware
0004	Gasket (top and front)
0005	Flange, top
0006	Clamping bracket
0007	Consumable anode
0010	Flange, front
0020	Reducer bushing, 1 ¼ in. x ¾ in.
0021	Brass tee
0022	Adaptor, 1 ¼ in. BSPT > NPT
0023	Temperature and pressure relief valve

Parts (not illustrated)

050	Installation Instructions
051	Start-up/Service Instructions
052	Operating Instructions and User's Information Manual



Vitocell 100-V, CVA Series 120 USG (450 Liter)

Model No. 120 USG (450 L) **Serial No.** 7510399□□□□□□□□

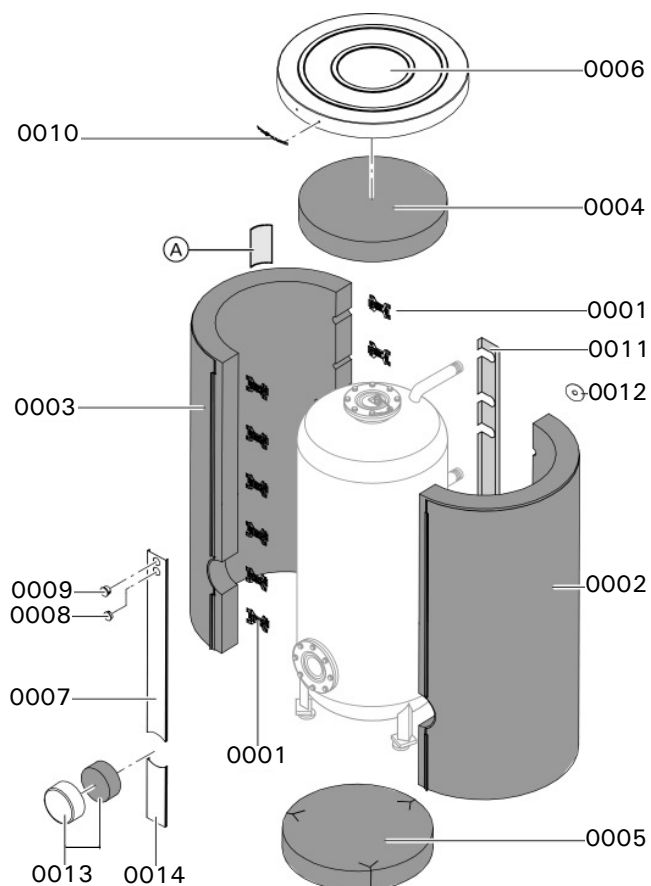
Ordering Replacement Parts:

Please provide tank Model and Serial Number from rating plate when ordering replacement parts. Order replacement components from your Viessmann distributor.

Parts

- 0001 Clip closures (x12)
- 0002 Right side insulation blanket
- 0003 Left side insulation blanket
- 0004 Top insulation blanket
- 0005 Bottom insulation blanket
- 0006 Top cover
- 0007 Front upper seam cover
- 0008 Thermometer cover
- 0009 Thermometer
- 0010 Viessmann nameplate
- 0011 Rear seam cover
- 0012 Rosette (x3)
- 0013 Front cover with thermal insulation
- 0014 Front lower seam cover

Ⓐ Rating plate



Vitocell 100-B, CVB Series 79 USG (300 Liter)

Model No. 79 USG (300 L) **Serial No.** 7134448□□□□□□□□

Ordering Replacement Parts:

Please provide tank Model and Serial Number from rating plate when ordering replacement parts. Order replacement components from your Viessmann distributor.

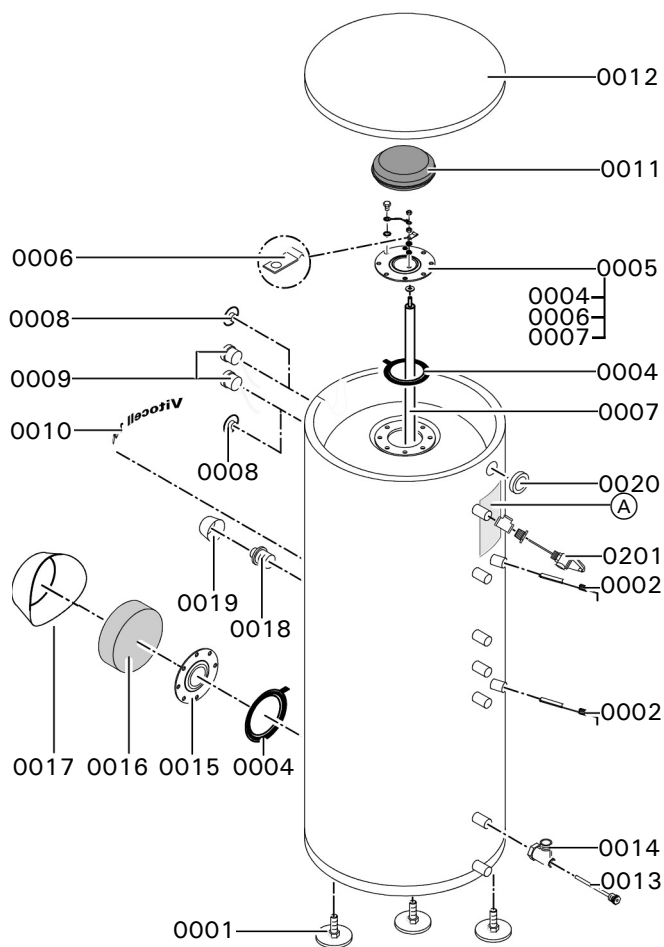
Parts

- 0001 Leveling foot
- 0002 Sensor mounting hardware
- 0004 Gasket
- 0005 Anode flange with gasket (0004) and anode (0007)
- 0006 Clamping bracket
- 0007 Consumable anode
- 0008 Thermometer cover (x2)
- 0009 Thermometer (x2)
- 0010 Nameplate Vitocell 100
- 0011 Flange insulation
- 0012 Top panel
- 0013 Sensor well
- 0014 Elbow
- 0015 Flanged cover with gasket (0004)
- 0016 Insulation for cover
- 0017 Front cover
- 0018 Plug
- 0019 Cover
- 0020 Grommet

Other Parts (not illustrated)

- 047 Elbow with sensor well (0014 and 0013)
- 100 Installation Instructions
- 101 Start-Up/Service Instructions
- 102 Operating Instructions and User's Information Manual
- 103 Parts List
- 200 Installation Fittings
- 201 Temperature and pressure relief valve

Ⓐ Rating plate



Vitocell 100-B, CVB Series 120 USG (450 Liter)

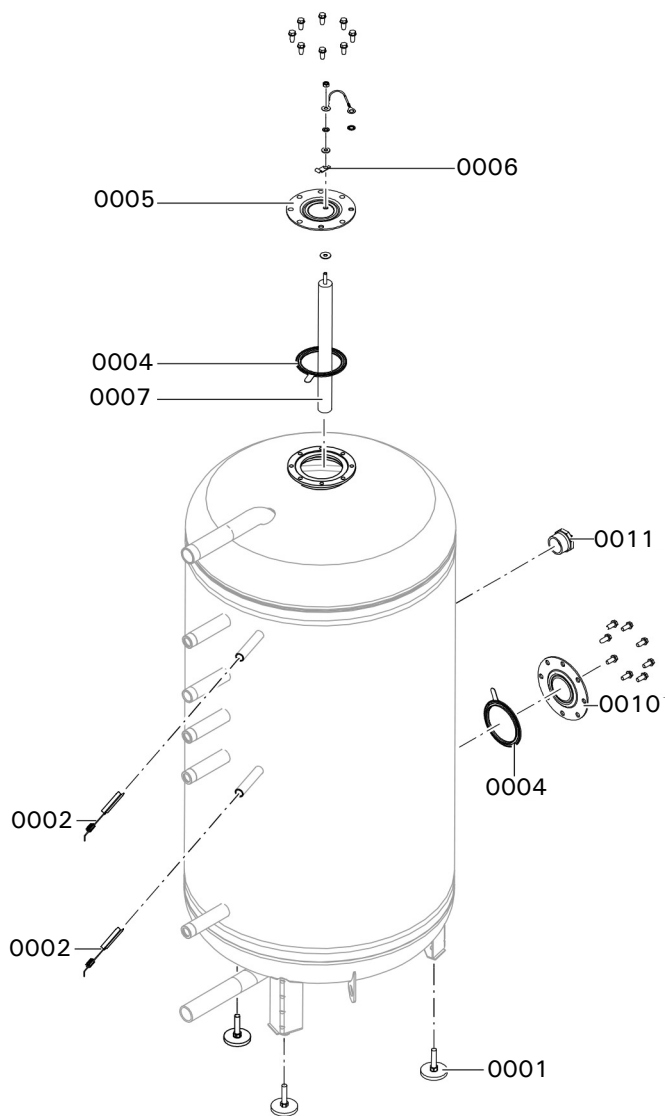
Model No. 120 USG (450 L) **Serial No.** 7510401□□□□□□□□

Ordering Replacement Parts:

Please provide tank Model and Serial Number from rating plate when ordering replacement parts. Order replacement components from your Viessmann distributor.

Parts

0001	Leveling foot
0002	Sensor mounting hardware
0004	Gasket
0005	Flange
0006	Clamping bracket
0007	Magnesium anode
0010	Front flange with gasket
0011	Plug



Vitocell 100-B, CVB Series 120 USG (450 Liter)

Model No.
120 USG (450 L)

Serial No.
7510401□□□□□□□□

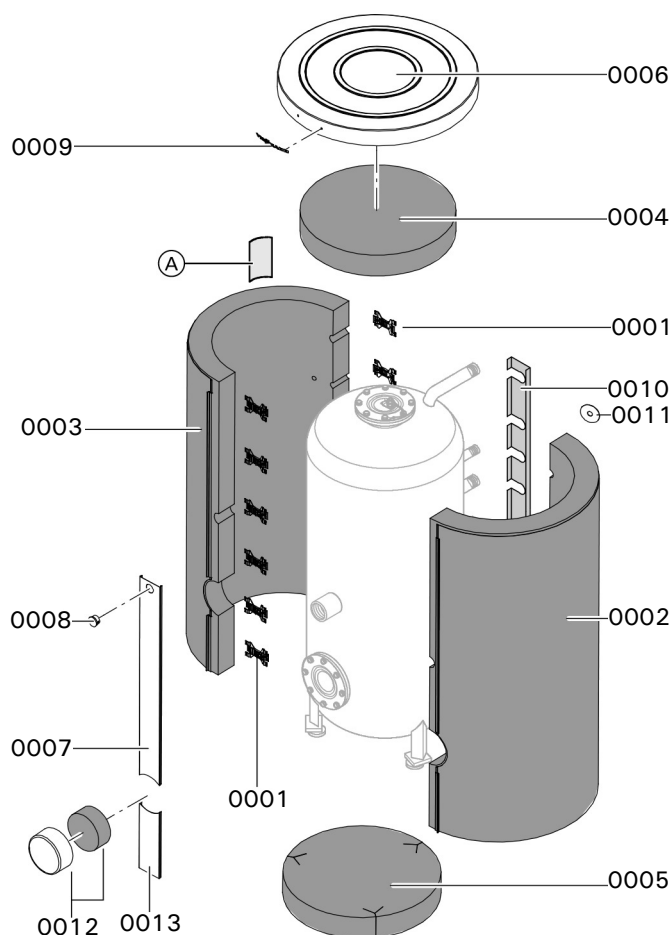
Ordering Replacement Parts:

Please provide tank Model and Serial Number from rating plate when ordering replacement parts. Order replacement components from your Viessmann distributor.

Parts

- 0001 Clip closures (x12)
- 0002 Right side insulation blanket
- 0003 Left side insulation blanket
- 0004 Top insulation blanket
- 0005 Bottom insulation blanket
- 0006 Top cover
- 0007 Front upper seam cover
- 0008 Thermometer
- 0009 Viessmann nameplate
- 0010 Rear seam cover
- 0011 Rosette (x5)
- 0012 Front cover with thermal insulation
- 0013 Front lower seam cover

Ⓐ Rating plate



Maintenance Record

	Start-up	Maintenance/Service	Maintenance/Service	Maintenance/Service	Maintenance/Service
date:					
by:					

	Start-up	Maintenance/Service	Maintenance/Service	Maintenance/Service	Maintenance/Service
date:					
by:					

